



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBT18420
Job Sheet 180976



Part No: RBT18420

Job Qty: 2 ea

Part Name: Wing Pin Puller



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/18/18

Job Tracking No:

Due Date: 9/25/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBT18420 Rev A IPP Rev A 18.03.21 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
60	Purchasing	2 pcs	9/25/18	9/25/18	0.00	0.00	Purchasing Start Up		AUG 22 2018 AUG 22 2018
70	Packaging	2 pcs	9/25/18	9/25/18	0.00	0.00	Packaging2		
80	QC	2 pcs	9/25/18	9/25/18	0.00	0.00	QC6		38 8/18/18 98/13
90	Small Fab	2 pcs	9/25/18	9/25/18	0.00	0.00	Small Fab-3		9-89
110	Small Fab	2 pcs	9/25/18	9/25/18	0.00	0.50	Small Fab-3	N/A	
120	QC	2 pcs	9/25/18	9/25/18	0.00	0.00	QC5		
130	Packaging	2 pcs	9/25/18	9/25/18	0.00	0.00	Packaging3-1		MCC
140	QC21-SA	2 Ea	9/25/18	9/25/18	0.00	0.00	QC21		21 AUG 24 2018

Part Op 60 - Issue PO to ARROW TECH MACHINE WORKS P/O: 040541 MANUFACTURE RBT18420 AS PER DWG.

Descriptions: -Certificate of conformity is required

110 - 1-Assemble as per DWG.

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBT18420P	Wing Pin Puller	2 Ea (1 ea)	60-Purchasing	5098587
91950A031	Washer, SS, 0.406" x 0.812"	2 pcs (1 ea)	90-Small Fab	
98407A134	Retaining Ring	2 pcs (1 ea)	90-Small Fab	
MS21209-F130L	Heli Coil Insert, #10-32	8 Ea (4 ea)	90-Small Fab	
NAS1149C0363R	Washer	8 Ea (4 ea)	90-Small Fab	
NAS1351-C316	Socket Head Cap Screw, #10-32	8 Ea (4 ea)	90-Small Fab	
RBT18420-1	Bolt	2 Ea (1 ea)	90-Small Fab	
RBT18420-3	Body	2 Ea (1 ea)	90-Small Fab	
RBT18420-5	Plate	2 Ea (1 ea)	90-Small Fab	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
60-Purchasing	RBT18420P	2	0	0
90-Small Fab	91950A031	2	50	0
	98407A134	2	100	0
	MS21209-F130L	8	50	0
	NAS1149C0363R	8	284	0
	NAS1351-C316	8	50	0
	RBT18420-1	2	0	0
	RBT18420-3	2	0	0
	RBT18420-5	2	2	0

QA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		Container No: S098608 Part: RBT18420 Job No: 180976 Serial No/Batch: S098608 Revision: A Inspector: _____ Exp Date: _____ Instructions: _____ Date: 09/02/18					
Description Work Order Deviation									
Root Cause <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; vertical-align: top;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:50%; vertical-align: top;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>		Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; vertical-align: top;"> Pressure/F ☐ Bending ☐ Centre Not ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width:50%; vertical-align: top;"> Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> </tr> </table>				Pressure/F ☐ Bending ☐ Centre Not ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐
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OTHER : _____		<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; vertical-align: top;"> Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="width:50%; vertical-align: top;"> Oned Wrong ☐ le Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> </table>				Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Oned Wrong ☐ le Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
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Part Specifications

Specifications could not be found.

Plex 7/18/18 2:52 PM Dart.lajeunesse.marie

DQA: _____ Date: _____



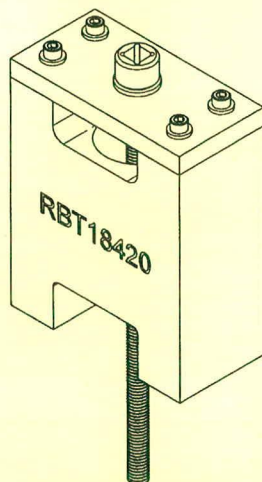
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

ITEM #	QTY	PART #	PART TITLE
-1	1	RBT18420-1	BOLT
-3	1	RBT18420-3	BODY
-5	1	RBT18420-5	PLATE
6	1	McMaster#98407A134	3/8" RETAINING RING
7	1	McMaster#91950A031	0.406" X 0.812" SS WASHER
8	4	NAS1351-C316	#10-32 SOCKET HEAD SCREW
9	4	NAS1149-C0363R	.203" X .438" X .063" SS WASHER
10	4	MS21209-F130L	#10-32 HELICAL INSERT



RBT18420 WING PIN PULLER

NOTES:

1) MATERIAL: N/A
2) HEAT TREAT: N/A

3) FINISH: N/A

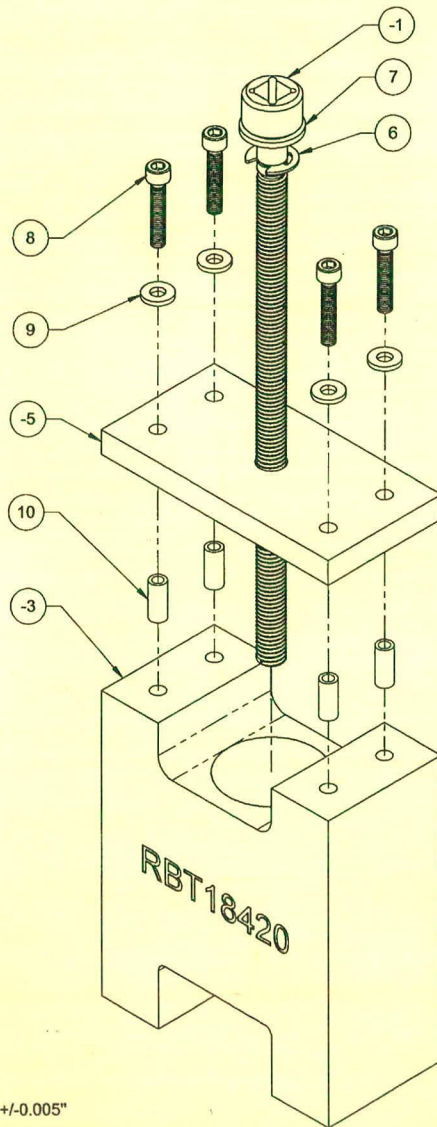
4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"

5) UNITS: INCHES UNLESS OTHERWISE NOTED

6) BREAK SHARP EDGES: N/A

7) IDENTIFICATION: N/A

8) ASSEMBLE AS SHOWN



A	NEW ISSUE	18-589	KT
REV.	DESCRIPTION	ECN #	BY
DESIGN	KT	DART AEROSPACE LTD	
DRAWN	KT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML 03/20/2018	TOOL PART #	REV. A
MFG. APPR.	DD 03/20/2018	RBT18420	SHEET 1 OF 4
APPROVED	ML 03/20/2018	TITLE	SCALE
DATE	3/20/2018	WING PIN PULLER	NTS
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THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
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Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No: 040541

Dated: 7/26/2018

Our Order / Job No: AWT040541

DAS
38
9-89

Order Qty: 2

Part Name: WING PIN PULLER

Part Number: RBT18420

Lot Size:N/A

Ship Date: 7/26/2018

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number: RBT18420

Rev:A

Material Size and Type: -1 4140 STEEL, -3 UHMW, -5 303 STAINLESS STEEL

Material Specifications: UHMW ASTM D4020, 303 AMS 5640, 4140 ASTM A108, ASTM A29

Heat Treatment: RC 28-32

Plating/Finish: BLACK OXIDE: QMSI-6.2.2 B.O. REV-D

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date:

07/26/18

Signed:

DAS
38
9-89

PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
Main: (541) 780-6938 | Fax: (458) 215-4938
www.atechmachineworks.com



**PHGE Machineworks dba
Arrowtech Machineworks**
29751 E Enid Rd.
Eugene, Oregon 97402
Phone: (541) 780-6937
Fax: (458) 215-4938

COMMERCIAL INVOICE

No: 116

Date: 7/27/2018
PO Ref: 40541
Ship via: FedEx Ground
Customer No: 17

SHIP TO ADDRESS:

Dart Aerospace
1270 Aberdeen St.
Hawksbury, ON
CANADA, K6A1K7
Phone: (613) 632-5200

This shipment does **not** contain hazardous materials.

Qty	Price	Item	Part No.	Total
2	\$1,159.85	Wing Pin Puller (HS Code 8207195030)	RBT18420P REV-A	\$2,319.70

TOTAL: \$2,319.70

Packaged by: *Q.E.*
Checked by: *H.I.E.*

Thank You





Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040541**

Supplier: ARR002-VU
Arrow Tech Machine Works
29751 E. Enid Road,
Unit C
Eugene, OR 97402 USA
Phone: 541-780-6938
Fax: 458-215-4938

PO No: PO040541

PO Date: 7/19/18

Due Date: 8/16/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lussier, PatrickPhone:

Pynt Terms: Net 30

Freight Terms:

Special Comments:

E-MAILED
JUL 19 2018

Ship To:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		RBT18420P	Wing Pin Puller	Firmed	-	8/16/18	2 Ea	0 Ea	2 Ea	\$1,159.85/Ea	\$2,319.70
Line Item Note W/O 180976 DAS 61 9-89 2X AUG 02 2018											
Grand Total:											\$2,319.70

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

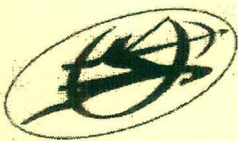
A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Plex 7/19/18 8:50 AM dart.Lussier.Patrick



**PHGE Machineworks dba
Arrowtech Machineworks**
29751 E Enid Rd. Unit C
Eugene, Oregon 97402
Phone: (541) 780-6938
Fax: (458) 215-4938

Customer Packing Slip

No: 116

Date: 07/27/2018
PO Ref: 040541
Ship via: Fedex Ground

Bill To:
Dart Aerospace
1270 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K7

Qty
2

Item
WING PIN PULLER

Part No.
RBT18420P REV-A

Packaged by: *P.E.*
Checked by: *H.I.E.*

Thank You

